NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 8/03/2012

Control	**3256-02-040**
Project	**C 3256-2-40**
Highway	**BW 8**
County	**HARRIS**

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an adendum notification which details the changes and the respective proposal pages which were added and/ or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped “This Proposal Issued for Informational Purposes.”

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

04/99

SUBJECT: PLANS AND PROPOSAL ADDENDUMS
PROJECT: C 3256-2-40 CONTROL: 3256-02-040
COUNTY: HARRIS
LETTING: 08/07/2012
REFERENCE NO: 0803

PROPOSAL ADDENDUMS

_ PROPOSAL COVER
X BID INSERTS (SH. NO.: SHT. 3 OF 11.)
X GENERAL NOTES (SH. NO.: "D".)
X SPEC LIST (SH. NO.: 1 THRU 3 OF 3.)
X SPECIAL PROVISIONS:
ADDED: 008---013, 462---015, 540---031

DELETED:

_ SPECIAL SPECIFICATIONS:
ADDED:

DELETED:

_ OTHER:

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

PROPOSAL:
****

BID INSERTS -

REVISED QUANTITY FOR BID ITEM 502-2001.

SPEC LIST -

ADDED SPECIAL PROVISION (008---013)

REPLACED S.P. (462---014) WITH S.P. (462---015).

REPLACED S.P. (540---023) WITH S.P. (540---031).

ADDED STANDARD SPEC ITEM 504.

DESCRIPTION OF ABOVE CHANGES (CONTINUED)
(INCLUDING PLANS SHEET CHANGES)

GENERAL NOTES:

ON SPEC DATA SHEET "D", UNDER GENERAL: UTILITIES, REVISED THIRD PARAGRAPH
ON SHEET STARTED AS "AT LEAST 48 HOURS BEFORE STARTING WORK,..."

PLANS:
*****

PLAN SHEET 11A (GENERAL NOTES) -
ON SPEC DATA SHEET "D", UNDER GENERAL: UTILITIES, REVISED THIRD PARAGRAPH
ON SHEET STARTED AS "AT LEAST 48 HOURS BEFORE STARTING WORK,..."

PLAN SHEET 12 (E & Q SHEET) -
REVISED QUANTITY FOR BID ITEM 502-2001.

PLAN SHEET 20 (SUMMARY OF TRAFFIC CONTROL QUANTITIES) -
REVISED QUANTITY FOR BID ITEM 502-2001.

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	400	2005		CEM STABIL BKFL DOLLARS and CENTS	CY	1,115.540	1
	400	2009	004	CUT & RESTORING PAV (CONC) DOLLARS and CENTS	SY	20.000	2
	402	2001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	1,268.000	3
	403	2001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	7,632.000	4
	409	2003		PRESTR CONC PIL (20 IN SQ) DOLLARS and CENTS	LF	7,888.000	5
	416	2008		DRILL SHAFT (60 IN) DOLLARS and CENTS	LF	1,084.000	6
	416	2022		DRILL SHAFT (SIGN MTS)(48 IN) DOLLARS and CENTS	LF	45.000	7
	416	2023		DRILL SHAFT (SIGN MTS)(54 IN) DOLLARS and CENTS	LF	280.000	8
	420	2005	002	CL C CONC (FOOTING) DOLLARS and CENTS	CY	376.600	9
	420	2051	002	CL C CONC (COLUMN) DOLLARS and CENTS	CY	520.000	10
	425	2019	001	PRESTR CONC U-BEAM (U54) DOLLARS and CENTS	LF	10,728.000	11

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	428	2001	001	CONC SURF TREAT (CLASS I) DOLLARS and CENTS	SY	16,213.000	12
	430	2003		CL C CONC FOR EXT STR (BENT) DOLLARS and CENTS	CY	1,566.100	13
	430	2004		CL S CONC FOR EXT STR (SLAB) DOLLARS and CENTS	CY	3,483.600	14
	432	2001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	102.000	15
	442	2047	016	STRUCTURAL STEEL(MISCELLANEOUS BRIDGE) DOLLARS and CENTS	LB	836.000	16
	450	2007	001	RAIL (TY T501) DOLLARS and CENTS	LF	3,407.300	17
	454	2001		SEALED EXPANSION JOINT (4 IN)(SEJ-A) DOLLARS and CENTS	LF	620.000	18
	462	2002	015	CONC BOX CULV (3 FT X 3 FT) DOLLARS and CENTS	LF	249.000	19
	462	2014	015	CONC BOX CULV (7 FT X 3 FT) DOLLARS and CENTS	LF	1,004.000	20
	465	2001	001	INLET (COMPL)(TY C) DOLLARS and CENTS	EA	1.000	21

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	2010	001	INLET (COMPL)(TY AAD) DOLLARS and CENTS	EA	4.000	22
	465	2011	001	INLET (COMPL)(TY AD) DOLLARS and CENTS	EA	2.000	23
	465	2214	001	MANH(COMPL)(JCT BX)(W/GRATE INLET)(SPL) DOLLARS and CENTS	EA	2.000	24
	471	2003		GRATE & FRAME DOLLARS and CENTS	EA	6.000	25
	481	2013		PVC PIPE (SCH 40)(8 IN) DOLLARS and CENTS	LF	240.000	26
	496	2002		REMOV STR (INLET) DOLLARS and CENTS	EA	9.000	27
	496	2007		REMOV STR (PIPE) DOLLARS and CENTS	LF	1,258.500	28
	496	2023		REMOVE STR (JUNCTION BOX) DOLLARS and CENTS	EA	7.000	29
	500	2001	005	MOBILIZATION DOLLARS and CENTS	LS	1.000	30
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HANDLING DOLLARS and CENTS	MO	15.000	31

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	506	2001	010	ROCK FILTER DAMS (INSTALL) (TY 1) DOLLARS and CENTS	LF	250.000	32
	506	2009	010	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	250.000	33
	506	2034	010	TEMPORARY SEDIMENT CONTROL FENCE DOLLARS and CENTS	LF	6,452.000	34
	512	2017	002	PORT CTB (DES SOURCE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	600.000	35
	512	2018	002	PORT CTB (DES SOURCE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	40.000	36
	512	2035	002	PORT CTB (STKPL)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	600.000	37
	512	2036	002	PORT CTB (STKPL)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	40.000	38
	512	2046	002	PORT CTB(MOVE)(SAFETY SH)(TY P&P) DOLLARS and CENTS	LF	120.000	39
	512	2059	002	PORT CTB (DES SOURCE)(SNGL SLP)(TY J-J) DOLLARS and CENTS	LF	3,840.000	40
	512	2060	002	PORT CTB (MOVE)(SNGL SLP)(TY J-J) DOLLARS and CENTS	LF	340.000	41
	512	2061	002	PORT CTB (STKPL)(SNGL SLP)(TY J-J) DOLLARS and CENTS	LF	5,340.000	42

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	512	2097	002	REMOVE PRECAST PORTABLE TRAFFIC BARRIER DOLLARS and CENTS	LF	975.000	43
	529	2002		CONC CURB (TY II) DOLLARS and CENTS	LF	8.000	44
	545	2002		CRASH CUSH ATTEN (MOVE & RESET) DOLLARS and CENTS	EA	1.000	45
	545	2003		CRASH CUSH ATTEN (REMOVE) DOLLARS and CENTS	EA	2.000	46
	610	2059	010	INS RD IL AM (U/P) (TY IF) (.15KW) DOLLARS and CENTS	EA	20.000	47
	610	2069	010	REMOVE RD IL ASM (U/P) DOLLARS and CENTS	EA	8.000	48
	618	2034		CONDT (PVC) (SCHD 80) (2") DOLLARS and CENTS	LF	30.000	49
	618	2035		CONDT (PVC) (SCHD 80) (2") (BORE) DOLLARS and CENTS	LF	228.000	50
	618	2048		CONDT (RM) (1 1/4") DOLLARS and CENTS	LF	1,600.000	51
	620	2009	001	ELEC CONDR (NO. 6) BARE DOLLARS and CENTS	LF	268.000	52

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	620	2010	001	ELEC CONDR (NO. 6) INSULATED DOLLARS and CENTS	LF	536.000	53
	620	2015	001	ELEC CONDR (NO.12) BARE DOLLARS and CENTS	LF	1,600.000	54
	620	2016	001	ELEC CONDR (NO.12) INSULATED DOLLARS and CENTS	LF	3,200.000	55
	624	2014	014	GROUND BOX TY D (162922) W/APRON DOLLARS and CENTS	EA	2.000	56
	628	2002	003	ELC SRV TY A 120/240 060 (NS)SS(E)GC(O) DOLLARS and CENTS	EA	1.000	57
	636	2001	014	ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	56.000	58
	636	2003	014	ALUMINUM SIGNS (TY O) DOLLARS and CENTS	SF	1,042.750	59
	636	2006	014	REFURBISH ALUMINUM SIGNS (TY O) DOLLARS and CENTS	EA	1.000	60
	636	2007	014	REPLACE EXISTING ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	16.000	61
	644	2001		IN SM RD SN SUP&AM TY10BWG(1)SA(P) DOLLARS and CENTS	EA	1.000	62

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	ITEM NO	DESC CODE	S.P. NO.				
	644	2004		IN SM RD SN SUP&AM TY10BWG(1)SA(T) DOLLARS and CENTS	EA	3.000	63
	644	2023		IN SM RD SN SUP&AM TYS80(1)SA(P-BM) DOLLARS and CENTS	EA	1.000	64
	644	2025		IN SM RD SN SUP&AM TYS80(1)SA(T) DOLLARS and CENTS	EA	1.000	65
	644	2056		RELOCATE SM RD SN SUP & AM TY 10BWG DOLLARS and CENTS	EA	2.000	66
	644	2060		REMOVE SM RD SN SUP & AM DOLLARS and CENTS	EA	2.000	67
	650	2166		INS OH SN SUP(175 FT BRDG) DOLLARS and CENTS	EA	1.000	68
	650	2172		RELOCATE EXISTING OVERHD SIGN SUP DOLLARS and CENTS	EA	1.000	69
	650	2173		REMOVE OVERHD SIGN SUP DOLLARS and CENTS	EA	1.000	70
	658	2258		INSTL DEL ASSM (D-SW)SZ (TYC)CTB DOLLARS and CENTS	EA	97.000	71
	658	2277		INSTL DEL ASSM (D-SY)SZ (TYC)CTB DOLLARS and CENTS	EA	15.000	72
	658	2278		INSTL DEL ASSM (D-SY)SZ (TYC)CTB(BI) DOLLARS and CENTS	EA	53.000	73

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	2064		WK ZN PAV MRK REMOV (W) 4" (BRK) DOLLARS and CENTS	LF	5,230.000	74
	662	2067		WK ZN PAV MRK REMOV (W) 4" (SLD) DOLLARS and CENTS	LF	9,420.000	75
	662	2099		WK ZN PAV MRK REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	5,780.000	76
	668	2106		PREFAB PAV MRK TY C (W) (ARROW) DOLLARS and CENTS	EA	16.000	77
	668	2116		PREFAB PAV MRK TY C (W) (WORD) DOLLARS and CENTS	EA	11.000	78
	668	2136		PREFAB PAV MRK (TY C)(MULTI)(SHIELD) DOLLARS and CENTS	EA	7.000	79
	672	2017	034	REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	662.000	80
	677	2001		ELIM EXT PAV MRK & MRKS (4") DOLLARS and CENTS	LF	40,860.000	81
	677	2002		ELIM EXT PAV MRK & MRKS (6") DOLLARS and CENTS	LF	11,369.000	82
	677	2003		ELIM EXT PAV MRK & MRKS (8") DOLLARS and CENTS	LF	2,930.000	83
	677	2005		ELIM EXT PAV MRK & MRKS (12") DOLLARS and CENTS	LF	910.000	84

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	677	2008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	5.000	85
	677	2018		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	5.000	86
	678	2001		PAV SURF PREP FOR MRK (4") DOLLARS and CENTS	LF	20,430.000	87
	678	2002		PAV SURF PREP FOR MRK (6") DOLLARS and CENTS	LF	16,020.000	88
	678	2003		PAV SURF PREP FOR MRK (8") DOLLARS and CENTS	LF	4,980.000	89
	678	2004		PAV SURF PREP FOR MRK (12") DOLLARS and CENTS	LF	3,878.000	90
	678	2007		PAV SURF PREP FOR MRK (ARROW) DOLLARS and CENTS	EA	16.000	91
	678	2018		PAV SURF PREP FOR MRK (WORD) DOLLARS and CENTS	EA	11.000	92
	678	2025		PAV SURF PREP FOR MRKS (SHIELD) DOLLARS and CENTS	EA	7.000	93
	678	2026		PAV SURF PREP FOR MRKS (9") DOLLARS and CENTS	LF	3,410.000	94

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	1112	2001		REM, STORE, & RESTORE ORNAMENTAL WALL DOLLARS and CENTS	LF	470.000	95
	3061	2004		FAST TRK CONC(CONT REINF HY STL)(13") DOLLARS and CENTS	SY	20.000	96
	5049	2001		BIODGRD EROSION CONTROL LOGS (8" DIA) DOLLARS and CENTS	LF	75.000	97
	5049	2003		BIODGRD EROSION CONTROL LOGS (12" DIA) DOLLARS and CENTS	LF	280.000	98
	5926	2001		REMOVE AND RELAY PAVERS DOLLARS and CENTS	SY	964.000	99
	6008	2001		SHIFT OVERHEAD SIGN PANELS DOLLARS and CENTS	EA	2.000	100
	6008	2002		REMOVE OVERHEAD SIGN PANELS DOLLARS and CENTS	EA	2.000	101
	6473	2004	001	MULTIPOLYMER PAV MRK (W)(6")(SLD) DOLLARS and CENTS	LF	10,620.000	102
	6473	2007	001	MULTIPOLYMER PAV MRK (W)(8")(SLD) DOLLARS and CENTS	LF	4,980.000	103
	6473	2009	001	MULTIPOLYMER PAV MRK (W)(12")(SLD) DOLLARS and CENTS	LF	3,260.000	104

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6473	2010	001	MULTIPOLYMER PAV MRK (W)(12")(LNDP) DOLLARS and CENTS	LF	618.000	105
	6473	2014	001	MULTIPOLYMER PAV MRK (Y)(6")(SLD) DOLLARS and CENTS	LF	5,400.000	106
	6986	2007		PREFB PV MK W/WNTY TY B(W)9"(BRK)CNTST DOLLARS and CENTS	LF	3,410.000	107

General Notes:

UNION PACIFIC RAILROAD COMPANY

Protection of Fiber Optic Cable Systems

Fiber optic cable systems may be buried on the railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. The State and/or its Contractor shall telephone the railroad during normal business hours (7:00 A.M. to 9:00 P.M., Central time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, seven-day number for emergency calls) to determine if fiber optic cable is buried on the railroad's premises to be used by the State. If it is, the State and/or its Contractor will telephone the telecommunications company(ies) involved, arrange for a cable locator and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the railroad's premises.

General:

If fixed features require, the governing slopes shown may vary between the limits shown and to the extent determined by the Engineer.

Super elevate the curves to match the existing surface.

Notify the Engineer immediately if discrepancies are discovered in the horizontal control or the benchmark data.

The following standard detail sheets are modified:

Modified Standards

None

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved, except for roadway illumination, electrical, and traffic signal items.

The cost for materials, labor, and incidentals to provide for traffic across the roadway and for ingress and egress to private property in accordance with Section 7.7 of the standard specifications is subsidiary to the various bid items. Restore access roadways to their original condition upon completing construction.

If a foundation is to be placed where a riprap surface or an asphalt concrete surface presently exists, use caution in breaking out the existing surface for placement. Break out no greater area

than is required to place the foundation. After placing the foundation, wrap the periphery with 0.5 in. pre-molded mastic expansion joint. Then replace the remaining portion of the broken out surface with Class A or Class C concrete or cold mix asphalt concrete to the exact slope, pattern, and thickness of the existing riprap or asphalt. Payment for breaking out the existing surface, wrapping the foundation, and replacing the surface is subsidiary to the various bid items.

The lengths of the posts for ground mounted signs and the tower legs for the overhead sign supports are approximate. Verify the lengths before ordering these materials to meet the existing field conditions and to conform to the minimum sign mounting heights shown in the plans.

Furnish aluminum Type A signs instead of plywood signs for signs shown on the Summary of Small Signs sheet.

Stencil the National Bridge Inventory (NBI) number on each existing bridge shown on these plans. The NBI number is shown above the title block for each bridge layout.

Clearly mark or highlight on the shop drawings, the items being furnished for this project. Submit required shop drawings in accordance with the shop drawing distribution list shown in the note for Item 5 for review and distribution.

Request additional soil information for this project at the Area Engineer's office.

Unless otherwise shown on the plans or otherwise directed, commence work after sunrise and ensure construction equipment is off the road by sunset.

General: Roadway Illumination and Electrical

For roadway illumination and electrical items, use materials from pre-qualified producers as shown on the Construction Division (CST) of the Department's material producers list. Check the latest link on the TxDOT website for this list. The category/item is "Roadway Illumination and Electrical Supplies." No substitutions will be allowed for materials found on this list.

Perform electrical work in conformance with the National Electrical Code (NEC) and Department standard sheets.

The Contractor may make the electrical grounding connections and permissible splices using the thermal fusion process, Cadweld, Thermaweld or approved equal, instead of bolted connections and splices.

The Area Engineer will arrange with the Contractor, an inspection of the completed electrical systems for the highway lighting systems before final acceptance for compliance with plans and specifications. The inspection will be made with personnel from the electrical section of the Department's District Transportation Operations Office.

General: Site Management

Mow the grass and weeds within the project limits a maximum of 3 times a year as directed. This work is subsidiary to the various bid items.

Mark stations every 100 ft. and maintain the markings for the project duration. Remove the station markings at the completion of the project. This work is subsidiary to the various bid items.

Do not mix or store materials, or store or repair equipment, on top of concrete pavement or bridge decks unless authorized by the Engineer. Permission will be granted to store materials on surfaces if no damage or discoloration will result.

Personal vehicles of employees are not permitted to park within the right of way, including sections closed to public traffic. Employees may park on the right of way at the Contractor's office, equipment, and materials storage yard sites.

Assume ownership of debris and dispose of at an approved location. Do not dispose of debris on private property unless approved in writing by the District Engineer.

Control the dust caused by construction operations. For sweeping the base material in preparation for laying asphalt and for sweeping the finished concrete pavement, use one of the following types of sweepers or equal:

Tricycle Type	**Truck Type - 4 Wheel**
Wayne Series 900	M-B Cruiser II
Elgin White Wing	Wayne Model 945
Elgin Pelican	Mobile TE-3
	Mobile TE-4
	Murphy 4042

General: Traffic Control and Construction

Schedule construction operations such that preparing individual items of work follows in close sequence to constructing storm drains in order to provide as little inconvenience as practical to the businesses and residents along the project.

Schedule work so that the base placement operations follow the subgrade work as closely as practical to reduce the hazard to the traveling public and to prevent undue delay caused by wet weather.

When design details are not shown on the plans, provide signs and arrows conforming to the latest "Standard Highway Sign Designs for Texas" manual.

General: Utilities

Consider the locations of underground utilities depicted in the plans as approximate and employ responsible care to avoid damaging utility facilities. Depending upon scope and magnitude of planned construction activities, advanced field confirmation by the utility owner or operator may be prudent. Where possible, protect and preserve permanent signs, markers, and designations of underground facilities.

If the Contractor damages or cause damage (breaks, leaks, nicks, dents, gouges, etc.) to the utility, contact the utility facility owner or operator immediately.

At least 48 hours before starting work, make arrangements for locating existing Department-owned above ground and underground fiber optic, communications, power, illumination, and traffic signal cabling and conduit. Do this by calling the Department's Houston District Traffic Signal Operations Office at 713-802-5662 to schedule marking of underground lines on the ground. Use caution if working in these areas to avoid damaging or interfering with existing facilities.

Notify the Engineer at least 48 hours before constructing junction boxes at storm drain and utility intersections.

Install or remove poles and luminaires located near overhead or underground electrical lines using established industry and utility safety practices. Consult the appropriate utility company before beginning such work.

If overhead or underground power lines need to be de-energized, contact the electrical service provider to perform this work. Costs associated with de-energizing the power lines or other protective measures required are at no expense to the Department.

If working near power lines, comply with the appropriate sections of Texas State Law and Federal Regulations relating to the type of work involved.

Perform electrical work in conformance with the National Electrical Code (NEC) and Department standard sheets.

Repair any damage to existing water mains or sanitary sewer lines at no cost to the city. Verify all existing water mains and sanitary sewer lines and contact the City Utilities Operations Department 48 hours prior to excavating near water mains or sanitary sewer lines. Coordinate any adjustments necessary to the water mains or sanitary sewer lines with the city.

Before beginning any underground work, notify the City of Houston's Chief Inspector, Public Works and Engineering, at (713) 859-3371 to establish the locations of any existing electrical systems for lighting facilities within the limits of this project.

Upon review of the submitted plan, CenterPoint Energy does not anticipate any immediate conflicts regarding the construction of the proposed widening of existing pavement to 6 main lines toll, consisting of concrete pavement, structure and other facilities.

One point of concern, however, is the placing of the drill shaft near our existing 8" gas main. Please maintain a minimum safe distance of 5', both horizontally and vertically, from our existing gas lines. These lines may pose a hazard if caution is not taken to definitely locate and avoid them during the proposed construction. We recommend that you use extreme caution when excavating near CenterPoint Energy gas facilities. Please contact Ronald Love, Construction Inspector, at 832-642-1269, one week prior to construction, to ensure lines are located and a representative may be present during the construction.

Please take note of the state requirement to notify the Utility Coordinating Committee for utility line location 48 hours prior to any excavation. (Phone 713-223-4567 or 1-800-669-8344). In order to facilitate communications during construction phase of this project, please note the following contact numbers:

To have our line located:
Utility Coordinating Committee
713-223-4567 or 1-800-669-8344

To report a damaged gas line (Emergency):
CenterPoint Energy Dispatcher
713-659-3552

Item 5: Control of the Work

Before contract letting, electronically generated earthwork cross-section data will be furnished free of charge to the prospective bidders on a compact high-density disk, in an ASCII print format. This will be available through the Association of General Contractors bulletin board service or through the Area Engineer's office. If the earthwork data is not available electronically, reproducible earthwork cross sections are available at the Area Engineer's office for borrowing by copying service companies for the purpose of making copies for the prospective bidders, at the prospective bidder's expense. The earthwork cross-section data provided above is for non-construction purposes only and it is the responsibility of the prospective bidder to validate the enclosed data with the appropriate plans, specifications, and estimates for the projects.

Submit shop drawings electronically for the fabrication of items as documented in Table 1 below. Information and requirements for electronic submittals can be viewed in the "Guide to Electronic Shop Drawing Submittal" which can be accessed through the following web link, ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf. References to

11 in. x 17 in. sheets in individual specifications for structural items imply electronic CAD sheets.

Table 1

2004 Construction Specification Required Shop/Working Drawing Submittals

Spec Item No.'s	Product	Submittal Required	Approval Required (Y/N)	Contractor/ Fabricator P.E. Seal Required	Reviewing Party
7.8	Construction Load Analyses	Y	Y	Y	B
400	Excavation and Backfill for Structures (cofferdams)	Y	N	Y	A
403	Temporary Special Shoring	Y	N	Y	B
420	Formwork/Falsework	Y	N	Y	A
423	Retaining Walls, (calcs req'd.)	Y	Y	Y	C
425	Optional Design Calculations (Prstrs Bms)	Y	Y	Y	B
425	Prestr Concr Sheet Piling	Y	Y	N	B
425	Prestr Concr Beams	Y	Y	N	B
425	Prestr Concr Bent	Y	Y	N	B
426	Post Tension Details	Y	Y	N	B
434	Elastomeric Bearing Pads (All)	Y	Y	N	B
441	Bridge Protective Assembly	Y	Y	N	B
441	Misc Steel (various steel assemblies)	Y	Y	N	B
441	Steel Pedestals (bridge raising)	Y	Y	N	B
441	Steel Bearings	Y	Y	N	B
441	Steel Bent	Y	Y	N	B
441	Steel Diaphragms	Y	Y	N	B
441	Steel Finger Joint	Y	Y	N	B
441	Steel Plate Girder	Y	Y	N	B
441	Steel Tub-Girders	Y	Y	N	B
441	Erection Plans	Y	N	Y	A
449	Sign-Structure Anchor Bolts	Y	Y	N	T
450	Railing	Y	Y	N	A
462	Concrete Box Culvert	Y	Y	N	C
462	Concrete Box Culvert (Alternate Designs Only,calcs reqd.)	Y	Y	Y	B
464	Reinforced Concrete Pipe (Jack and Bore only; ONLY when requested)	Y	Y	Y	A
465	Pre-cast Junction Boxes, Grates, and Inlets	Y	Y	N	A
465	Pre-cast Junction Boxes, Grates, and Inlets (Alternate Designs Only, calcs req'd.)	Y	Y	Y	B
466	Pre-cast Headwalls and Wingwalls	Y	Y	N	A
467	Pre-cast Safety End Treatments	Y	Y	N	A
495	Raising Existing Structure (calcs reqd.)	Y	Y	Y	B
610	Roadway Illumination Supports (Non-Standad only, cals reqd.)	Y	Y	Y	T
613	High Mast Illumination Poles (Non-standard only, calcs reqd.)	Y	Y	Y	T
627	Treated Timber Poles	Y	Y	N	T
644	Special Non-Standard Supports (Bridge Mounts, Barrier Mounts, Etc.)	Y	Y	Y	T
647	Large Roadside Sign Supports	Y	Y	Y	T
650	Cantilever Sign Structure Supports - Alternate Design Cacls.	Y	Y	Y	T

650	Sign Structures	Y	Y	N	T
652	Highway Sign Lighting Fixtures	Y	Y	N	T
654	Sign Walkways	Y	Y	N	T
680	Installation of Highway Traffic Signals	Y	Y	N	T
682	Vehicle and Pedestrian Signal Heads	Y	Y	N	T
684	Traffic Signal Cables	Y	Y	N	T
685	Roadside Flashing Beacon Assemblies	Y	Y	N	T
686	Traffic Signal Pole Assemblies (Steel) (Non-Standard only)	Y	Y	Y	T
687	Pedestal Pole Assemblies	Y	Y	N	T
688	Detectors	Y	Y	N	A
784	Repairing Steel Bridge Members	Y	Y	Y	B
SS	Prestr Concr Crown Span	Y	Y	N	B
SS	Sound Barrier Walls	Y	Y	N	B
SS	Camera Poles	Y	Y	Y	TMS
SS	Pedestrian Bridge (Calcs req'd.)	Y	Y	Y	B
SS	Screw-In Type Anchor Foundations	Y	Y	N	T
SS	Fiber Optic/Communication Cable	Y	Y	N	TMS
SS	Spread Spectrum Radios for Signals	Y	Y	N	T
SS	VIVDS System for Signals	Y	Y	N	T
SS	CTMS Equipment	Y	Y	N	TMS

Key to Reviewing Party

A - Area Office

Area Office	Email Address
North Harris Area Office	HOU-NHAShpDrwgs@txdot.gov
Traffic Systems Construction Office	HOU-TSCShpDrwgs@txdot.gov

B - Bridge Engineer

Bridge Design (TxDOT)	HOU-BrgShpDrwgs@txdot.gov

C - Construction Office

Construction	HOU-ConstrShpDrwgs@txdot.gov
Laboratory	HOU-LabShpDrwgs@txdot.gov

T - Traffic Engineer

Traffic Operations	HOU-TrfShpDrwgs@txdot.gov

TMS – Traffic Management System

Computerized Traffic Management Systems (CTMS)	HOU-CTMSShpDrwgs@txdot.gov

Item 7: Legal Relations and Responsibilities

Do not initiate activities in a Project Specific Location (PSL), associated with a U.S. Army Corps of Engineers (USACE) permit area, that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include those pertaining to, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Associated defined here means materials are delivered to or from the PSL. The permit area includes the waters of the U.S. or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. Assume responsibility for consultations with the USACE regarding activities, including PSLs that have not been previously evaluated by the USACE. Provide the Department with a copy of consultations or approvals from the USACE before initiating activities.

The Contractor may proceed with activities in PSLs that do not affect a USACE permit area if a self-determination has been made that the PSL is non-jurisdictional or if proper USACE clearances have been obtained in jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. The Contractor is solely responsible for documenting any determinations that their activities do not affect a USACE permit area. Maintain copies of their determinations for review by the Department or any regulatory agency.

Document and coordinate with the USACE, if required, before hauling any excavation from or hauling any embankment to a USACE permit area by either 1 or 2 below:

1. **Restricted Use of Materials for the Previously Evaluated Permit Areas.** Document both the Project Specific Locations (PSL) and their authorization. Maintain copies for review by the Department or any regulatory agency. When an area within the project limits has been evaluated by the USACE as part of the permit process for this project:
    a. Suitable excavation of required material in the areas shown on the plans and cross sections as specified in the Item, "Excavation" is used for permanent or temporary fill (under the Item, "Embankment") within a USACE permit area.
    b. Suitable embankment (under the Item, "Embankment") from within the USACE permit area is used as fill within a USACE evaluated area.
    c. Unsuitable excavation or excess excavation, "Waste" (under the Item, "Excavation"), that is disposed of at a location approved within a USACE evaluated area.

2. **Contractor Materials from Areas Other than Previously Evaluated Areas.** Provide the Department with a copy of USACE coordination or approvals before initiating any activities for an area within the project limits that has not been evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow and disposal sites:

a. The Item, "Embankment" used for temporary or permanent fill within a USACE permit area.
b. Unsuitable excavation or excess excavation, "Waste" (under the Item, "Excavation"), that is disposed of outside a USACE evaluated area.

The total area disturbed for this project is 7.7 acres. The disturbed area in this project, the project locations in the Contract, and Contractor project specific locations (PSLs) within 1 mile of the project limits for the Contract, will further establish the authorization requirements for storm water discharges. The Department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI for PSLs on the ROW to the Engineer (to the appropriate MS4 operator when on an off-state system route) and to the local government that operates a separate storm drain system.

Before construction operations begin, provide a drawing of the location of proposed temporary access roads, haul roads, or temporary fill used during construction operations to ensure that they are not within Jurisdictional Waters of the United States.

If the Contractor elects to use an area not permitted and determined to be within Jurisdictional Waters of the United States during the prosecution of the work, the Contractor will hold the Department harmless for delays caused by procuring the necessary permits from the United States Army Corps of Engineers.

This project requires *(formal consultation or permits)* with environmental resource agencies. There is a high probability of encountering environmentally sensitive areas on Contractor designated project specific locations (PSLs) for this project (haul roads, equipment staging areas, borrow pits, disposal sites, field offices, storage areas, parking areas, etc.). This Item provides listings of regulatory agencies the Contractor may need to contact for this project.

Maintain the roadway slope stability. Maintaining slope stability is subsidiary to the various bid items.

Item 8: Prosecution and Progress

Create, maintain, and submit for approval, a Critical Path Method (CPM) project schedule using computer software that is fully compatible with version 3.1 of Primavera Systems, Inc. or Primavera Project Planner (P3).

The Department will supply bidders, upon written request, one electronic copy of the time determination schedule. The time determination schedule provided is for informational use only and is not intended for bidding or construction purposes.

The Department will not adjust the number of days for the project and milestones, if any, due to differences in opinion regarding any assumptions made in the preparation of the schedule or for errors, omissions, or discrepancies found in the time determination schedule.

Working days will be computed and charged based on a 6 day workweek in accordance with Section 8.3.A.2

Provide a virus-free computer disk or diskette containing the Primavera construction schedule.

The Lane Closure Assessment Fee is $2,500.00. This fee applies to the Contractor for closures or obstructions that overlap into restricted hour traffic for each hour or portion thereof, per lane, regardless of the length of lane closure or obstruction. For Restricted Hours subject to Lane Assessment Fee refer to the Item, "Barricades, Signs, and Traffic Handling."

Items 360, 420, and 421: All Concrete Items

For the Department's concrete cylinder split samples, transport the test cylinders to the Houston District Laboratory located at 7600 Washington Avenue in Houston, or to the appropriate Area Laboratory, when applicable. Transporting the test cylinders is subsidiary to the various bid items.

The approach pavement is paid for under the Item, "Concrete Pavement."

Item 400: Excavation and Backfill for Structures

Plugging existing pipe culverts is subsidiary to the various bid items.

If Recycled Cement Treatment (Type D) is included in the plans, the following additional requirements apply:

1. Use only approved sand, crushed concrete, or salvaged base free from deleterious matter, as aggregate for cement-stabilized backfill

2. Provide crushed concrete or salvaged base backfill material in accordance with the Item, "Cement Treatment (Plant-Mixed)(Type D)" (base or crushed concrete), except the recycled Type D material must not contain Reclaimed Asphalt Pavement (RAP).

3. For backfill material below the spring line of pipes, use cement-stabilized sand rather than Recycled Type D backfill material.

4. For the cement-stabilized sand backfill, use a minimum of 7 percent of hydraulic cement based on the dry weight of backfill material. The cement content for the crushed concrete and salvaged base is specified in the Item, "Cement Treatment (Plant-Mixed) (Type D)."

5. Place and compact the stabilized backfill material using a gradation that provides a dense mass without segregating and is impervious to passing of water.

Item 416: Drilled Shaft Foundations

Include the cost for furnishing and installing anchor bolts mounted in the drilled shafts in the unit bid price for the various diameter drilled shafts.

The Department may test using ultrasonic methods the anchor bolts for overhead sign supports, light standards, and traffic signal poles after they are installed. Replace faulty anchor bolts as directed. Do not weld the anchor bolts.

Item 420: Concrete Structures

Unless otherwise noted, use Class C concrete with an ordinary surface finish for signal, lighting, or sign structure foundations.

Mass concrete is a plans quantity item.

Item 421: Hydraulic Cement Concrete

Entrained air is required in all slip formed concrete (bridge rail, concrete traffic barrier, pavement, etc.), but is not required for other structural concrete. Adjust the dosage of air entraining agent for low air content as directed or allowed by the Engineer. If entrained air is provided where not required, only the upper limits of the Special Provision will be enforced.

Item 450: Railing

Add a 3/4-in. longitudinal chamfer to the SSTR railing. Provide a continuous chamfer typically located 6 in. above the final grade. The cost of this is subsidiary to the Item, "Railing."

Item 465: Manholes and Inlets

If required on the plans, build manholes and inlets to stage 1 construction, cover with temporary pavement, and complete in a later phase of construction. This temporary covering and pavement are subsidiary to the various bid items.

If building manholes or inlets in graded areas, first construct them to an elevation at least 4 in. above the top of the highest entering pipe and cover with a wooden cover. Complete the construction of such manholes or inlets to the finished elevation when completing the grading work for such manholes or inlets. Adjust the final elevation, if required, since this elevation is approximate.

Construct manholes and inlets in paved areas to an elevation so their temporary wooden covers are flush with the surface of the base material.

Do not leave excavations or trenches open overnight.

Items 496: Removing Structures

Do not permit debris resulting from the structure removal or construction activities to enter a natural or manmade waterway such as drainage channels, rivers, streams, bays, etc. Remove debris which falls into such waterways. This work is subsidiary to the Item, "Removing Structures."

Item 502: Barricades, Signs, and Traffic Handling

Use a traffic control plan for handling traffic through the various phases of construction. Follow the phasing sequence unless otherwise agreed upon by the Area Engineer and the Project Manager. Ensure this plan conforms to the latest "Texas Manual on Uniform Traffic Control Devices" and the latest Barricade and Construction (BC) Standard Sheets.

Submit changes to the traffic control plan to the Area Engineer. Provide a layout showing the construction phasing, signs, striping, and signalizations for changes to the original traffic control plan.

Furnish and maintain the barricades and warning signs, including the necessary temporary and portable traffic control devices, during the various phases of construction. Place and construct these barricades and warning signs in accordance with the latest "Texas Manual on Uniform Traffic Control Devices" for typical construction layouts.

Cover work zone signs when work related to the signs is not in progress, or when any hazard related to the signs no longer exists.

Keep the delineation devices, signs, and pavement markings clean. This work is subsidiary to the Item, "Barricades, Signs, and Traffic Handling."

Erect temporary signs when exit ramps are closed or moved to new locations during construction.

Cover or remove the permanent signs and construction signs that are incorrect or that do not apply to the current situation for a particular phase.

Replace the overhead signs, informational signs, and exit signs to be removed, with temporary signs providing the correct information to the traveling public. Size the replacement signs and include them in the traffic control plan.

Do not mount signs on drums or barricades, except those listed in the latest Barricades and Construction standard sheets.

Use traffic cones for daytime work only. Replace the cones with plastic drums during nighttime hours.

Place positive barriers to protect drop-off conditions greater than 2 ft. within the clear zone that remain overnight.

Use shadow vehicles with Truck Mounted Attenuators (TMA) for lane closures during construction. Do not reduce the existing number of lanes open to traffic except as shown on the following time schedule:

One Lane Closure

Day	Daytime Closure Hours	Nighttime Closure Hours	Restricted Hours Subject to Lane Assessment Fee
Monday	09:00 AM – 03:00 PM	08:00 PM – 05:00 AM	05:00 AM – 09:00 AM 03:00 PM - 08:00 PM
Tuesday	09:00 AM – 03:00 PM	08:00 PM – 05:00 AM	05:00 AM – 09:00 AM 03:00 PM - 08:00 PM
Wednesday	09:00 AM – 03:00 PM	08:00 PM – 05:00 AM	05:00 AM – 09:00 AM 03:00 PM - 08:00 PM
Thursday	09:00 AM – 03:00 PM	08:00 PM – 05:00 AM	05:00 AM – 09:00 AM 03:00 PM - 08:00 PM
Friday	09:00 AM – 03:00 PM	08:00 PM – 05:00 AM	05:00 AM – 09:00 AM 03:00 PM - 08:00 PM
Saturday	No Restrictions	No Restrictions	N/A
Sunday	No Restrictions	No Restrictions	N/A

The above times are approved for the traffic control conditions listed. The Area Engineer may approve other closure times if traffic counts warrant. The Area Engineer may reduce the above times for special events.

During construction, remove, cover, adjust, or replace overhead sign panels to correspond with each current traffic control phase. The desirable size of letters for freeways is 10 in., the minimum is 8 in. This work is subsidiary to Item 502.

Item 504: Field Office and Laboratory

Furnish one Type A structure for the laboratory. Ensure the windows for the structure have burglar bars.

Equip each lab with a fire extinguisher and first aid kit. Also equip the labs with an eye wash station. Provide equipment that meets the minimum OSHA requirements. At a minimum, furnish 20 lb. fire extinguishers that are rated for Type A, B, and C fires.

Provide a fenced enclosure approximately 100 ft. by 200 ft. Provide an appropriate parking area covered with a suitable base material and with a minimum of 2 security lights, one on each end of the lot. Cost of the work and materials to provide the enclosure are subsidiary to the various bid items.

Piped in water to the Engineer's building will not be required, but furnish water for curing concrete test specimens.

The above requirements are subsidiary to the various bid items.

Assume ownership of temporary chain link security fences.

Item 506: Temporary Erosion, Sedimentation and Environmental Control

A Storm Water Pollution Prevention Plan (SW3P) is required. Since the disturbed area is more than 5 acres, a "Notice of Intent" (NOI) is also required.

Use appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. Remove and dispose of materials in compliance with State and Federal laws.

Before starting construction, review with the Engineer the SW3P used for temporary erosion control as outlined on the plans. Before construction, place the temporary erosion and sedimentation control features as shown on the SW3P.

Schedule the seeding or sodding work as soon as possible. The project schedule provides for a vegetation management plan.

After completing earthwork operations, restore and reseed the disturbed areas in accordance with the Department's specifications for permanent or temporary erosion control.

Implement temporary and permanent erosion control measures to comply with the National Pollution Discharge Elimination System (NPDES) general permit under the Clean Water Act.

Before starting grading operations and during the project duration, place the temporary or permanent erosion control measures to prevent sediment from leaving the right of way.

Item 512: Portable Concrete Traffic Barrier

Transport Low Profile Concrete Traffic Barriers (CTB) used for traffic handling from the Department stockpile located on the north side of IH 610 at Long Drive.

Transport Standard Height Concrete Traffic Barriers (including JJ Hook and Safety Shape) used for traffic handling from the Department stockpile located on the south side of IH 610 at Cedar Crest Blvd. (located across IH 610 from Long Drive).

Use only the J-J Hook type connection between barriers.

After completing the project, return Low Profile Concrete Traffic Barriers (CTB) used for traffic handling, to the Department stockpile located on the north side of IH 610 at Long Drive.

After completing the project, return Standard Height Concrete Traffic Barriers(including J-J Hook and Safety Shape) used for traffic handling, to the Department stockpile located on the south side of at IH 610 at Cedar Crest Blvd. (located across IH 610 from Long Drive).

After completing the project, return the associated CTB connecting hardware to the area office or as directed.

If placing the concrete traffic barrier on pre-stressed concrete box beams with exposed reinforcing steel, protect the reinforcing steel by supporting the concrete traffic barrier on 4 in. by 4 in. timbers. Place the timbers transversely and space them on 4 ft. centers. The cost of the labor and materials to perform this work are subsidiary to the Item, "Portable Concrete Traffic Barrier."

Item 610: Roadway Illumination Assemblies

Instructions for submitting shop drawings electronically are available on the internet at the Department's home page (http://www.txdot.gov), Business with TxDOT, Bridge Information, Shop Drawings. The file is titled: Guide to Electronic Shop Drawing Submittal. The direct link is: ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf.

Item 616: Performance Testing of Lighting Systems

The illumination plans provide for a complete illumination system installed, connected, tested, and ready for operation.

After satisfactory completion of tests, place the new lighting fixtures in operation. Final acceptance will be made after the fixtures operate satisfactorily for a minimum period of 14 days. The 14-day test period is included in the allowed working days.

Assume responsibility for the new lighting fixtures during the test period. Make adjustments or repairs as required and repair defects or damage at no expense to the Department.

Item 618: Conduit
Item 620: Electrical Conductors

Item 628: Electrical Services

If the specifications for electrical items require UL-listed products, this means UL-listed or CSA-listed.

Item 618: Conduit

When backfilling bore pits, ensure that the conduit is not damaged during installation or due to settling backfill material. Compact select backfill in 3 equal lifts to the bottom of the conduit; or if using sand, place it 2 in. above the conduit. Ensure backfill density is equal to that of the existing soil. Prevent material from entering the conduit.

Construct bore pits a minimum of 5 ft. from the edge of the base or pavement. Close the bore pit holes overnight.

Unless shown on the plans, install underground conduit a minimum of 24 in. deep. Install the conduit in accordance with the latest National Electrical Code (NEC) and applicable Department standard sheets. Place conduit under driveways or roadways a minimum of 24 in. below the pavement surface.

If using casing to place bored conduit, the casing is subsidiary to the conduit.

If placing the conduit under existing pavement to reach the service poles, bore the conduit in place and extend it a minimum distance of 5 ft. beyond the edge of shoulder or the back of curb.

Use materials from pre-qualified producers as shown on the Department's Construction Division (CST) material producers list. Check the latest links on the TxDOT website for the list. The category is "Roadway Illumination and Electrical Supplies." The polymer concrete barrier box is subsidiary to Item 618, "Conduit."

Item 620: Electrical Conductors

Test each wire of each cable or conductor after installation. Incomplete circuits or damage to the wire or the cable are cause for immediate rejection of the entire cable being tested. Remove and replace the entire cable at no expense to the Department. Also test the replacement cable after installation.

When pulling cables or conductors through the conduit, do not exceed the manufacturer's recommended pulling tensions. Lubricate the cables or conductors with a lubricant recommended by the cable manufacturer.

Ensure that circuits test clear of faults, grounds, and open circuits.

Split bolt connectors are allowed only for splices on the grounding conductors.

For electrical licensing and electrical certification requirements for this project, see Item 7 of the Standard Specifications and any applicable special provisions to Item 7.

Item 624: Ground Boxes

The ground box locations are approximate. Alternate ground box locations may be used as directed, to avoid placing in sidewalks or driveways.

During construction and until project completion, provide personnel and equipment necessary to remove ground box lids for inspection. Provide this assistance within 24 hours of notification.

Construct concrete aprons in accordance with the latest standard sheet ED (3). Make the depth of the concrete apron the same as the depth of the ground box, except for Type 1 and Type 2 ground boxes. For Type 1 or Type 2 ground boxes, construct the concrete apron in accordance with details shown on the "Ground Box Details Installations" standard.

Item 628: Electrical Services

Furnish a UL-listed meter can for electrical service poles. Furnish a size and style of meter can in accordance with the requirements of the local electrical service provider. This work is subsidiary to the Item, "Electrical Services."

Verify and coordinate the electrical service location with the engineering section of the appropriate utility district or company.

Identify the electrical service pole with an address number assigned by the Utility Service Provider. Provide 2-in. numerals visible from the highway. Provide numbers cut out aluminum figures nailed to wood poles or painted figures on steel poles or service cabinets.

Item 636: Aluminum Signs

Include aluminum route markers, exit only panels, routing signs, and other special panels attached to guide signs in the unit bid price for the parent guide sign material.

The locations of sign panels on overhead structures are approximate. Verify in the field before installing.

When design details are not shown on the plans, provide signs and arrows conforming to the latest "Standard Highway Sign Designs for Texas" manual.

Item 644: Small Roadside Sign Supports and Assemblies

Sign locations shown on the plans are approximate. Before placing them, obtain approval of and then stake the exact locations for these signs.

Use the Texas Universal Triangular Slip Base with the concrete foundation for small ground mounted signs, unless otherwise shown in the plans.

When design details are not shown on the plans, provide signs and arrows conforming to the latest "Standard Highway Sign Designs for Texas" manual.

Assume ownership of the removed existing signs.

Locations of the relocated signs are approximate. Before placing them, obtain approval of and then stake the exact locations for these signs.

Replace existing signs that become damaged during relocation at no expense to the Department.

Item 650: Overhead Sign Supports

Stencil the structure numbers on the new structures for permanent identification.

If sign panels mounted on an overhead sign support face the same direction of traffic, keep the bottoms of the sign panels in the same horizontal plane, unless otherwise shown in the plans.

There is no additional reimbursement for blocking or shims for fits of alignment.

Mill test reports are not required for the walkway, grating, miscellaneous secondary structural items, or hardware.

Use the existing panel supports if removing existing guide signs and if placing new panels of different sizes at the same location. Extend the supports, if needed. If the supports extend over the top of the panel, cut off the supports at the top of the panel or the top of the truss, whichever is higher.

Before fabricating, field check the sign structure elevations, details, and dimensions shown on the plans.

Assume ownership of removed existing overhead sign supports and other removed materials.

Item 656: Foundations for Traffic Control Devices

Using ready mix concrete for sign foundations is optional.

Item 662: Work Zone Pavement Markings

At the end of each day's work, mark roadways that remain open to traffic during construction operations with standard pavement markings, in accordance with the latest "Texas Manual on Uniform Traffic Control Devices."

Using raised markers for removable work zone pavement markings on final concrete surfaces is optional.

Item 662: Work Zone Pavement Markings
Item 668: Prefabricated Pavement Markings
Item 6473: Multipolymer Pavement Markings (MPM)

Use Type III glass beads for multipolymer pavement markings.

Use a 0.022 in. (22 mil) thickness for multipolymer pavement markings, measured to the top of the multipolymer, not including the exposed glass beads.

For roadways with asphalt surfaces to be striped with work zone or permanent thermoplastic markings, the Contractor has the option to apply paint and beads markings for a maximum 30-day period until placing the thermoplastic markings, or until starting the succeeding phase of work on the striped area. Maintain the paint and beads markings, at no expense to the Department, until placing the thermoplastic markings or starting the succeeding phase of work on the striped area. The work zone markings, whether paint and beads or thermoplastic, are paid under the Item, "Work Zone Pavement Markings" and the markings are paid for only once for the given phase of construction.

If using paint and bead markings as described above, purchase the traffic paint from the open market.

If the Type II markings become dirty and require cleaning by washing, brushing, compressed air, or other approved methods before applying the Type I thermoplastic markings, this additional cleaning is subsidiary to the Item, "Reflectorized Pavement Markings."

Establish the alignment and layout for work zone striping and permanent striping.

Stripe roadways before opening them to traffic.

Place pavement markings under these items in accordance with details shown on the plans, the latest "Texas Manual on Uniform Traffic Control Devices," or as directed.

When design details are not shown on the plans, provide pavement markings for arrows, words, and symbols conforming to the latest "Standard Highway Sign Designs for Texas" manual.

Item 672: Raised Pavement Markers

If other operations are complete on the project and if the curing time period is not yet elapsed, the contract time will be suspended until the curing is done.

Before placing the raised pavement markers on concrete pavement, blast clean the surface using an abrasive-blasting medium. This work is subsidiary to the Item, "Raised Pavement Markers."

Provide epoxy adhesive that is machine-mixed or nozzle-mixed and dispensed. Equip the machine or nozzle with a mechanism to ensure positive mix measurement control.

Item 677: Eliminating Existing Pavement Markings and Markers

Remove existing pavement markings on concrete or asphalt surfaces by flail milling or as directed.

Item 678: Pavement Surface Preparation for Markings

Do not blast clean asphalt concrete pavement. Clean asphalt concrete pavement as required under the applicable specifications or as directed.

On new concrete pavement or on existing concrete pavement when placing a new stripe on a new location, remove the curing compounds and contamination from the pavement surface by flail milling or as directed. In addition, air-blast the surface with compressed air just before placing the new stripe.

On existing concrete pavement when placing a new stripe on an existing location, after removing the existing stripe under the Item, "Eliminating Existing Pavement Markings and Markers," air-blast the surface with compressed air just before placing the new stripe.

Perform air blasting with a compressor that is capable of generating air at a minimum of 100 psi using 5/16 in. or larger hosing for the air blast (equipment should have sufficient capacity to remove contaminants but not damage the pavement surface). Do not clean concrete pavement by grinding.

Item 6008: Shifting or Removing Existing Overhead Signs

Assume ownership of the removed sign panels.

Basis of Estimate

Item	Description	Limit and Rate	Unit
310	Prime Coat	0.25 Gal. / Sq. Yd.	GAL

* For Contractor's information only (non-pay item).

** If used in existing roadway base, rate will be determined on a case by case basis.

CONTROL : 3256-02-040
PROJECT : C 3256-2-40
HIGHWAY : BW 8
COUNTY : HARRIS

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION JUNE 1, 2004. STANDARD SPECIFICATIONS ARE INCORPORATED INTO THE CONTRACT BY REFERENCE.

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS
ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES (132)(401)(420)(421)
ITEM 402 TRENCH EXCAVATION PROTECTION
ITEM 403 TEMPORARY SPECIAL SHORING (423)
ITEM 409 PRESTRESSED CONCRETE PILING (404)(420)(421)(424)(425)(426)(440)(780)
ITEM 416 DRILLED SHAFT FOUNDATIONS (420)(421)(440)(448)
ITEM 420 CONCRETE STRUCTURES (400)(404)(421)(426)(427)(438)(440)(441)(448)
ITEM 425 PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS (420)(421)(424)(426)(427)(434)(440)(442)
ITEM 428 CONCRETE SURFACE TREATMENT (427)
ITEM 430 EXTENDING CONCRETE STRUCTURES (420)(421)(440)(448)
ITEM 432 RIPRAP (247)(420)(421)(427)(431)(440)
ITEM 442 METAL FOR STRUCTURES (441)(445)(446)(447)(448)(449)
ITEM 450 RAILING (420)(421)(424)(440)(441)(442)(445)(446)(448)(540)
ITEM 454 BRIDGE EXPANSION JOINTS (429)(442)
ITEM 462 CONCRETE BOX CULVERTS AND STORM DRAINS (400)(420)(421)(424)(440)(464)(476)
ITEM 465 MANHOLES AND INLETS (400)(420)(421)(440)(471)
ITEM 471 FRAMES, GRATES, RINGS, AND COVERS (441)(445)(448)
ITEM 481 PVC PIPE FOR DRAINS (400)
ITEM 496 REMOVING STRUCTURES (430)
ITEM 500 MOBILIZATION
ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING
ITEM 504 FIELD OFFICE AND LABORATORY
ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS (432)(556)

ITEM 512 PORTABLE CONCRETE TRAFFIC BARRIER (420)(421)(424)(440)
(442)
ITEM 529 CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER (360)
(420)(421)(440)
ITEM 545 CRASH CUSHION ATTENUATORS (421)
ITEM 610 ROADWAY ILLUMINATION ASSEMBLIES (421)(441)(442)(445)(446)
(449)(616)(620)
ITEM 618 CONDUIT (400)(445)(476)(622)
ITEM 620 ELECTRICAL CONDUCTORS
ITEM 624 GROUND BOXES (420)(421)(432)(440)(618)(620)
ITEM 628 ELECTRICAL SERVICES (441)(445)(449)(618)(620)(627)(656)
ITEM 636 ALUMINUM SIGNS (643)
ITEM 644 SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES (421)(440)
(441)(442)(445)(634)(636)(643)(656)
ITEM 650 OVERHEAD SIGN SUPPORTS (420)(421)(441)(442)(445)(449)
(618)
ITEM 658 DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)
ITEM 662 WORK ZONE PAVEMENT MARKINGS (666)(668)(672)(677)
ITEM 668 PREFABRICATED PAVEMENT MARKINGS (678)
ITEM 672 RAISED PAVEMENT MARKERS (677)(678)
ITEM 677 ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS (300)
(302)(316)
ITEM 678 PAVEMENT SURFACE PREPARATION FOR MARKINGS

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE
---------- PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED
HEREON WHEREVER IN CONFLICT THEREWITH.

SPECIAL LABOR PROVISIONS FOR STATE PROJECTS (000---007)
WAGE RATES
SPECIAL PROVISION "PARTNERING" (000--2329)
SPECIAL PROVISION "SMALL BUSINESS ENTERPRISE IN STATE FUNDED
PROJECTS" (000--2301)
SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000--2332)
SPECIAL PROVISION "DEPARTMENT DIVISION MAILING AND PHYSICAL ADDRESS"
(000---011)
SPECIAL PROVISION TO ITEM 1 (001---015)
SPECIAL PROVISION TO ITEM 2 (002---017)
SPECIAL PROVISIONS TO ITEM 3 (003---015)(003---033)
SPECIAL PROVISION TO ITEM 4 (004---017)
SPECIAL PROVISION TO ITEM 5 (005---004)
SPECIAL PROVISION TO ITEM 6 (006---030)
SPECIAL PROVISIONS TO ITEM 7 (007---918)(007---959)
SPECIAL PROVISIONS TO ITEM 8 (008---013)(008---119)
SPECIAL PROVISIONS TO ITEM 9 (009---012)(009---015)
SPECIAL PROVISION TO ITEM 247 (247---033)
SPECIAL PROVISION TO ITEM 400 (400---004)
SPECIAL PROVISION TO ITEM 420 (420---002)
SPECIAL PROVISION TO ITEM 421 (421---035)
SPECIAL PROVISION TO ITEM 424 (424---002)
SPECIAL PROVISION TO ITEM 425 (425---001)
SPECIAL PROVISION TO ITEM 428 (428---001)

SPECIAL PROVISION TO ITEM 429 (429---008)
SPECIAL PROVISION TO ITEM 431 (431---001)
SPECIAL PROVISION TO ITEM 434 (434---003)
SPECIAL PROVISION TO ITEM 440 (440---006)
SPECIAL PROVISION TO ITEM 441 (441---007)
SPECIAL PROVISION TO ITEM 442 (442---016)
SPECIAL PROVISION TO ITEM 448 (448---002)
SPECIAL PROVISION TO ITEM 450 (450---001)
SPECIAL PROVISION TO ITEM 462 (462---015)
SPECIAL PROVISION TO ITEM 464 (464---006)
SPECIAL PROVISION TO ITEM 465 (465---001)
SPECIAL PROVISION TO ITEM 476 (476---003)
SPECIAL PROVISION TO ITEM 500 (500---005)
SPECIAL PROVISION TO ITEM 502 (502---033)
SPECIAL PROVISION TO ITEM 506 (506---010)
SPECIAL PROVISION TO ITEM 512 (512---002)
SPECIAL PROVISION TO ITEM 540 (540---031)
SPECIAL PROVISION TO ITEM 610 (610---010)
SPECIAL PROVISION TO ITEM 620 (620---001)
SPECIAL PROVISION TO ITEM 624 (624---014)
SPECIAL PROVISION TO ITEM 628 (628---003)
SPECIAL PROVISION TO ITEM 636 (636---014)
SPECIAL PROVISION TO ITEM 672 (672---034)
SPECIAL PROVISION TO SPECIAL SPECIFICATION ITEM 6473 (6473--001)

SPECIAL SPECIFICATIONS:

ITEM 1112 REMOVE, STORE, AND RESTORE ORNAMENTAL WALL
ITEM 3061 FAST TRACK CONCRETE PAVEMENT
ITEM 5049 BIODEGRADEABLE EROSION CONTROL LOGS
ITEM 5926 REMOVE AND RELAY LANDSCAPE PAVERS
ITEM 6008 SHIFTING OR REMOVING EXISTING OVERHEAD SIGNS (636)
ITEM 6473 MULTIPOLYMER PAVEMENT MARKING S (MPM) (677)(678)(8094)
ITEM 6986 LONGITUDINAL PREFABRICATED PAVEMENT MARKINGS (PPM) WITH WARRANTY
ITEM 8094 MOBILE RETROREFLECTIVITY DATA COLLECTION FOR PAVEMENT MARKINGS

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH
---- PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

SPECIAL PROVISION

008---013

Prosecution and Progress

For this project, Item 008, "Prosecution and Progress," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

This Item is supplemented by the following:

8.13 Lane Closure Assessment Fees. Monetary assessment, as shown on the plans, will be made against the Contractor for any lane closure or obstruction that overlaps into the peak hour traffic for each hour or portion thereof, per lane, regardless of the length of lane closure or obstruction.

A. Definition of Terms. For this contract the following definitions apply:

1. Hour. Any continuous 60-minute period or portion of a continuous 60-minute period beginning at that point when a lane(s) is closed or obstructed by the Contractor's operations.

2. Assessment Fee. The amount shown in the proposal, representing the average hourly cost of interference and inconvenience to the road user for each lane closed or obstructed during peak hour traffic.

3. Closure or Obstruction. When the Contractor's operations result in a useable lane width of the travelway or shoulder less than that specified in the plan documents.

4. Peak Hour Traffic Times. Schedule of days and times described in the General Notes, when lane closures or obstructions are not allowed.

B. Fee Calculation and Collection. The assessment fee will be deducted from the amount due the Contractor on the monthly construction estimate, and thus retained by the Department. The Engineer will determine the time of overlap of lane closure(s) or obstruction(s) for calculating the assessment fee. The assessment fee is based on road user costs and is assessed not as a penalty, but for added expense incurred by the traveling public.

SPECIAL PROVISION

462---015

Concrete Box Culverts and Storm Dains

For this project, Item, 462, "Concrete Box Culverts and Storm Drains," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 462.2. Materials, Section A. General. The last two paragraphs are voided and replaced by the following:

Furnish material for machine-made precast boxes in accordance with DMS-7310, "Reinforced Concrete Pipe and Machine-Made Precast Box Culvert Fabrication and Plant Qualification."

Article 462.2. Materials, Section B. Fabrication, 3. Machine-Made Precast is voided and replaced by the following:

Machine-made precast box culvert fabrication plants must be approved in accordance with DMS-7310, "Reinforced Concrete Pipe and Machine-Made Precast Box Culvert Fabrication and Plant Qualification." The Construction Division maintains a list of approved machine-made precast box culvert plants.

Fabricate machine-made precast boxes in accordance with DMS-7310.

Article 462.2. Materials, Section C. Testing, 2. Formed Precast is voided and replaced by the following:

Make, cure, and test compressive test specimens in accordance with Tex-704-I.

Article 462.2 Materials, Section C. Testing, 3. Machine-Made Precast is voided and replaced by the following:

Make, cure, and test compressive test specimens in accordance with DMS-7310.

Article 462.2. Materials, Section D. Lifting Holes. The first paragraph is voided and replaced by the following:

For precast boxes, provide no more than 4 lifting holes in each section. Lifting holes may be cast, cut into fresh concrete after form removal, or drilled. Provide lifting holes of sufficient size for adequate lifting devices based on the size and weight of the box section. Do not use lifting holes larger than 3 in. in diameter. Do not cut more than 5 in. in any direction of reinforcement per layer for lifting holes.

Article 462.2. Materials, Section E. Marking. The first paragraph is voided and replaced by the following:

Mark precast boxes with the following:

- name or trademark of fabricator and plant location;
- ASTM designation;
- date of manufacture;
- box size;
- minimum and maximum fill heights;
- designated fabricator's approval stamp;
- boxes to be used for jacking and boring (when applicable);
- designation "SR" for boxes meeting sulfate-resistant concrete plan requirements (when applicable); and
- match marks for proper installation, when required under Section 462.2.F, "Tolerances."

Article 462.2. Materials, Section F. Tolerances. is voided and replaced by the following:

Ensure that precast sections meet the permissible variations listed in ASTM C 1577 and the following requirement:

- The sides of a section at each end do not vary from being perpendicular to the top and bottom by more than 1/2 in. when measured diagonally between opposite interior corners.

Ensure that wall and slab thicknesses are not less than shown on the plans except for occasional deficiencies not greater than 3/16 in. or 5%, whichever is greater. If proper jointing is not affected, thicknesses in excess of plan requirements are acceptable.

Deviations from the above tolerances will be acceptable if the sections can be fitted at the plant or job site and the joint opening at any point does not exceed 1 in. Use match marks for proper installation on sections that have been accepted in this manner.

1. **Boxes for Jacking Operations.** For boxes to be used for jacking operations (as defined in Item 476, "Jacking, Boring, or Tunneling Pipe or Box,") meet the following additional requirements:
    - The box ends must be square such that no point deviates more than 3/8 in. from a plane placed on the end of the box that is perpendicular to the box sides, and
    - The slab and wall thicknesses must not be less than specified on the plans and must not exceed the specified thickness by more than 1/2 in.

Article 462.2. Materials, Section G. Defects and Repair. The following paragraph is added:

Repair machine-made precast boxes in accordance with DMS-7310, "Reinforced Concrete Pipe and Machine-Made Precast Box Culvert Fabrication and Plant Qualification."

Article 462.2. Materials, Section H. Storage and Shipment. The following paragraph is added:

Store and ship machine-made precast boxes in accordance with DMS-7310, "Reinforced Concrete Pipe and Machine-Made Precast Box Culvert Fabrication and Plant Qualification."

Article 462.3 Construction, Section C. Jointing. The first paragraph is voided and replaced by the following:

Unless otherwise shown on the plans, use any of the jointing materials in accordance with the joint requirements specified in Item 464, "Reinforced Concrete Pipe." Rubber gasketed joints may be substituted for tongue and groove joints, provided they meet the requirements of ASTM C 1677 for design of the joints and permissible variations in dimensions.

SPECIAL PROVISION

540---031

Metal Beam Guard Fence

For this project, Item 540, "Metal Beam Guard Fence," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 540.2. Materials, Section A. Metal Beam Rail Elements. The first paragraph is replaced by the following:

Furnish new metal beam rail elements for rail, terminal anchor sections, transitions and downstream anchor terminal that meet the requirements of Table 1.

The third paragraph is replaced by the following:

Furnish metal beam rail elements from a manufacturer on the Department's approved Material Producer List, entitled "Metal Beam Guard Fence Rail Element Manufacturers."

Article 540.2. Materials, Section B. Posts, Section 2. Steel Posts is voided and replaced by the following:

2. Steel Posts. Provide rolled sections conforming to the material requirements of ASTM A 36. Drill or punch posts for standard rail attachment as shown on the plans. Galvanize in accordance with Item 445, "Galvanizing." Low fill culvert posts may be fabricated as galvanized "blanks" with the hole to accept the rail and the final height field fabricated. Treat all exposed post surfaces caused by the field fabrication in accordance with Section 445.3.D. "Repairs."

Article 540.2. Materials, Section B. Posts, Table 1, Rail Element Requirements. The section entitled "**Markings"** is voided and replaced by the following:

Markings	Permanently mark each metal beam rail element with the information required in AASHTO M 180. Permanently mark all curved sections of metal beam rail element, in addition, with the radius of the curved section in the format "R=xx ft." These additional markings (die-imprinted) must be on the back of the metal beam rail section away from traffic and visible after erection.

Article 540.2. Materials, Section B. Posts is supplemented by the following:

3. Composite Posts. Meet the requirements of DMS-7210, "Composite Material Posts and Blocks for Metal Beam Guard Fence."

Article 540.2. Materials is supplemented by the following:

H. Terminal Anchor Posts. Furnish new terminal anchor posts from steel conforming to the material requirements of ASTM A 36. Fabricate posts in accordance with Item 441, "Steel Structures." Galvanize terminal anchor posts after fabrication in accordance with Item 445, "Galvanizing."

I. Driveway Terminal Anchor Posts. Furnish new terminal anchor posts from steel conforming to the material requirements of ASTM A 36. Fabricate posts in accordance with Item 441, "Steel Structures." Galvanize terminal anchor posts after fabrication in accordance with Item 445, "Galvanizing."

J. Downstream Anchor Posts. Furnish new terminal anchor posts consisting of new rectangular timber and new steel foundation tubes in accordance with details shown in the plans.

K. Downstream Anchor Hardware. Furnish new hardware (brackets, plates, struts, cable, etc.) in accordance with the details shown on the plans and galvanized in accordance with Item 445, "Galvanizing."

L. Controlled Released Terminal (CRT) Posts. Furnish new controlled released terminal (CRT) posts conforming to the requirements of DMS-7200, "Timber Posts and Blocks for Metal Beam Guard Fence." in accordance to the details shown on the plans.

Article 540.3. Construction, Section B. Rail Elements is supplemented by the following:

Short Radius. Special rail fabrication will be required at installations having a curvature of less than 150 ft. radius. The required radius shall be as shown on the plans. Short radius metal beam guard fence requires the placement of controlled release terminal (CRT) posts of the quantity shown on the plans.

Article 540.3. Construction is supplemented by the following:

G. Driveway Terminal Anchor Posts. Embed terminal anchor posts in concrete unless otherwise shown on the plans.

Article 540.4. Measurement is supplement by the following:

D. Short Radius. Measurement will be by the foot to the nearest whole foot along the face of the rail in place, from beginning of radius (and first CRT post) to the end of radius.

E. Driveway Terminal Anchor Section. Measurement will be by each section, complete in place, consisting of a driveway terminal anchor post and one 6 ft. section of rail element.

F. Downstream Anchor Terminal. Measurement will be by each section, complete in place, consisting of two downstream anchor posts and one 9 ft. – 4 ½" section of rail element.

G. Long Span System. Measurement will be by the foot of fence. Fence shall be measured on the face of the rail in place, from first CRT post in the system to the last CRT post in the system.

Article 540.5. Payment. The first paragraph is voided and replaced by the following:
540.5. Payment. The work performed and material furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Metal W-Beam Guard Fence" of the post type specified, "Metal Thrie-Beam Guard Fence" of the post type specified, "Terminal Anchor Section," "Metal Beam Guard Fence Transition" of the type specified, "Metal W-Beam Guard Fence Adjustment," "Metal Thrie-Beam Guard Fence Adjustment," "Terminal Anchor Section Adjustment," "Transition Adjustment," "Short Radius," "Driveway Terminal Anchor Section, "Downstream Anchor Terminal," or "Metal Beam Guard Fence (Long Span System)." When weathering steel is required, Type IV will be specified.

Article 540.5. Payment, Section C. Transition is voided and replaced by the following:

C. Transition. The price bid for "Metal Beam Guard Fence Transition" is full compensation for furnishing nested sections of thrie-beam; nested sections of W-beam; thrie-beam-to-W-beam transitional rail piece, posts, concrete, curb, and connections to W-beam guard fence and bridge rails; thrie-beam terminal connectors and terminal connectors; excavation and backfilling; and equipment, labor, tools, and incidentals.

Article 540.5. Payment is supplemented by the following:

E. Short Radius. The price bid for "Short Radius" is full compensation for furnishing special rail fabricated metal beam guard fence, controlled release terminal (CRT) posts, materials, hauling, erection, blocks, driving posts, excavating, backfilling, equipment, labor, tools, and incidentals.

F. Driveway Terminal Anchor Section. The price bid for "Driveway Terminal Anchor Section " is full compensation for furnishing the rail element, driveway anchor assembly, driveway terminal anchor post, and foundations; installing the rail element anchor assembly and the driveway terminal anchor post and foundations; excavation and backfilling; and equipment, labor, tools, and incidentals.

G. Downstream Anchor Terminal. The price bid for "Downstream Anchor Terminal" is full compensation for furnishing the rail element, w-beam end section, guardrail anchor bracket, shelf angle bracket, channel strut, downstream anchor posts, Breakaway Cable Terminal (BCT) cable anchor assembly, and foundations; installing the BCT cable anchor assembly and the downstream anchor post and foundations; excavation and backfilling; and equipment, labor, tools, and incidentals.

H. Long Span System. The price bid for "Metal Beam Guard Fence (Long Span System)" is full compensation for furnishing the rail element, controlled release terminal (CRT) posts, materials, hauling, erection, blocks, driving posts, excavating, backfilling, equipment, labor, tools, and incidentals.